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The hour was later changed to 8 A.M. It is to be noted that certain persistent discrepancies appear when the observations, after reduction to sea-level, are compared, the most noteworthy cases being those of stations which are more or less completely shut in by hills of considerable elevation. The result of this condition is to check somewhat the horizontal movement of the air, and to give too high a pressure during the morning. At the three stations where this topographic effect is most marked the excess of pressure averages about .02 inch at 8 A.M.

NOTE.

It is well known that the winter snowfall is a great help in lumbering operations in our northern forests, for it greatly facilitates the labor of hauling out the trees. In a recent article on the 'Forest School at Biltmore' (*Forestry and Irrigation*, November), Dr. Schenck notes, among the disadvantages of the Biltmore forest tracts, the lack of winter snows, which allow 'cheap sleighing to take the place of expensive wagoning.'

R. DE C. WARD.

THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

THE twentieth annual meeting of the association was held at the Columbian University, Washington, D. C., on November 19, 20, 21, with an attendance of 150, the largest on record. A large part of the meeting was devoted to the reports of the referees and associate referees on the analysis of foods. Dr. William Frear, as chairman of the committee on pure food standards, reported that those on meats and the principal meat products, milk and its products, sugars and related substances, condiments (except vinegar), and cocoa products, were ready for adoption as official and the proclamation so declaring them was signed by Secretary Wilson on November 21. The circular containing these standards is now in press and will be ready for distribution in a short time.

Slight changes were made in the official methods for the analysis of sugars and insecticides and a new division of the work was created by a motion to appoint a referee on

drugs. A resolution was adopted requesting the Bureau of Standards through its chemist to participate in the work of the referees fixing standard methods of analysis. The committee on fertilizer legislation was instructed to prepare a bill for submission to Congress regulating interstate commerce in fertilizers and fertilizing materials.

The executive committee was given permission to call the meeting of the association next year at St. Louis and there is every probability that such action will be taken. The officers elected are as follows:

President—M. E. Jaffa, Berkeley, Cal.

Vice-President—C. L. Penny, Newark, Del.

Secretary—H. W. Wiley, Washington, D. C.

Additional Members of the Executive Committee—W. P. Headden, Fort Collins, Colo.; W. R. Perkins, Agricultural College, Mass.

SCIENTIFIC NOTES AND NEWS.

MR. SHYAMAJI KRISHNAVARMA, of India, has offered \$5,000 to Oxford University to establish a lectureship in honor of Herbert Spencer to be known as the Spencer Lectureship.

THE prize for French contributions to science given by M. Osiris through the Paris Press Association has been divided between Mme. Curie and M. Branly. Mme. Curie receives 60,000 francs for her work on radium and M. Branly 40,000 francs for his work in connection with wireless telegraphy.

THE sixtieth birthday of Dr. Robert Koch was celebrated on December 11. A portrait bust was unveiled in the Institute for Infectious Diseases, Berlin, a museum for bacteriology was established and a *Festschrift* is in press. Dr. Koch expects to return from South Africa in March.

At the St. Louis meeting of the Astronomical and Astrophysical Society of America the following officers, including those who hold over, were elected for the ensuing year: *President*, Simon Newcomb; *First Vice-President*, George E. Hale; *Second Vice-President*, W. W. Campbell; *Secretary*, George C. Comstock; *Treasurer*, C. L. Doolittle; *Councilors*, Ormond Stone, W. S. Eichelberger, E. C. Pickering, R. S. Woodward.

At the St. Louis meeting of the Geological Society of America, Professor John C. Branner, of Stanford University, was elected president and Professor H. L. Fairchild, of the University of Rochester, was reelected secretary. We regret that the names were accidentally interchanged in the last issue of SCIENCE.

GOVERNOR BATES, of Massachusetts, in his annual message recommends the appointment of a state forester and greater attention to the forest resources of the state.

PROFESSOR N. S. SHALER, of Harvard University, will spend the next four months abroad traveling in Egypt, Asia Minor and Greece.

DR. J. C. BRANNER, professor of geology at Stanford University, has received leave of absence and is about to go to Europe.

The American Geologist states that Mr. O. H. Hershey has charge of the gold mine in Humboldt County, California, and is studying the geology of the Klamath Mountains.

AN Ohio State Forestry Association has been organized with Mr. W. I. Chamberlain as president, and Professor W. R. Lazenby as secretary.

DR. HERMAN M. BIGGS, medical officer of the health board of the City of New York, lectured at the College of the City of New York, on January 5, his subject being 'The Health of the City of New York.'

SIR OLIVER LODGE lectured at the University of Birmingham on 'Radium and its Meaning,' on January 5, Mr. Joseph Chamberlain, the chancellor of the university, presiding.

MR. GIFFORD PINCHOT, chief of the Bureau of Forestry, will attend the meetings of the National Live Stock Association and the National Woolgrowers' Association, which will be held at Portland, Ore., from January 11-15, in order to learn the sentiment of these associations in regard to the policy of forest reserves.

PROFESSOR RUSSELL H. CHITTENDEN, director of the Sheffield Scientific School of Yale University, has announced the thirty-eighth Course of Sheffield Lectures for 1904. The list of subjects and speakers is as follows:

January 15. 'The Tower of Pelée: New Researches in Martinique': Professor Angelo Heilprin.

January 22. 'Triumphs of Engineering': Mr. Frank W. Skinner, C.E.

January 29. 'Expeditions among the Rockies of British Columbia; a Reconnaissance for the Platinum Metals': Mr. Howard W. DuBois, M.E.

February 5. 'Around the World in Search of the Unexpected': Mr. Horace Fletcher.

February 12. 'Recent Archeological Discoveries in Northwestern America': Mr. Harlan I. Smith.

February 19. 'Wireless Telegraphy': Professor M. I. Pupin.

February 26. 'Comets': Professor Frederick L. Chase.

March 4. 'The Revolutionary Movement in the Philippines': Capt. John R. M. Taylor, U.S.A.

March 11. 'Electrochemistry at Niagara Falls': Professor C. F. Chandler.

March 18. 'Radio-activity': Professor Ernest Rutherford.

PROFESSOR KARL ALFRED VON ZITTEL, the eminent paleontologist of the University of Munich, died on January 6.

MR. HENRY W. LOTHROP, a student of entomology, died at Providence, R. I., on January 5, at the age of sixty years.

MR. BEVERLY BURTON, an American chemist, who has resided in Munich for a number of years, died in that city on January 5.

A CIVIL service examination will be held on February 3 and 4 to fill vacancies in the position of civil engineer in the Philippine services at salaries of \$1,400 and \$1,800.

THE House of Representatives has appropriated \$250,000 toward the eradication of the cotton boll weevil.

THE will of Peter B. Brigham, of Boston, leaving \$5,000,000 to the Brigham Hospital, has been sustained by the court.

JOHN WILLIAM CUDWORTH has bequeathed about £70,000 to the Dr. Pusey Library, Oxford.

HERR A. SAMSON has bequeathed to the Munich Academy of Science 500,000 Marks for research in scientific ethics.

THE *Electrical World* states that in order to celebrate the twenty-fifth anniversary of the introduction and commercial development of

the incandescent lamp, the friends and associates of Mr. Thomas A. Edison have taken steps to found a medal which will be entrusted to the American Institute of Electrical Engineers. The circular which is being issued by the Edison Medal Association announces that it is the intention that the medals shall be awarded each year to the graduating student who shall present the best thesis on some original subject from the universities and colleges of the United States and Canada which have regular courses in electrical engineering. It is proposed that the medal shall be executed by some artist of distinction and that if possible a permanent fund of about \$5,000 shall be established for its maintenance. It is proposed to present the medal fund at the annual dinner of the institute on February 11, which is Mr. Edison's birthday.

WE learn from *Nature* that the Venetian Academy of Sciences, Letters and Arts, offers prizes of 3,000 lire under the Querini-Stampaglia foundation for monographs on the following subjects: The lakes of Venetian district, treated from a physiographic and biological standpoint; the works of Manuzi as a critic of Greek and Latin literature; the origins of Venetian painting; and advances in the projective geometry of algebraic surfaces of two dimensions in space of n dimensions. Under the Cavalli foundation, a similar prize is offered for an essay on the effects of modern social and economic conditions, etc., on landlords and farmers, with especial reference to the Venetian provinces. Under the Balbi Valier foundation an award of the same amount is offered for advances in medicine or surgery for the period 1902-3, and under the Minich foundation a prize of 3,000 lire is offered for embryological researches on the development of the larynx, the trachea and the lungs in vertebrates and birds.

IN his annual message Governor Odell, of New York, writes as follows in regard to the New York State School of Forestry: "By Chapter 122 of the Laws of 1898 the State purchased Townships 23 and 26 in the County of Franklin, and Cornell University thereupon took title and undertook practical demonstration and instruction in the School of

Forestry. Its operations had for their object the substitution for so-called worthless timber of valuable growths, but this has resulted in the practical destruction of all trees upon the lands where the experiment was in progress. No compensating benefits seem possible to the present generation. The preservation of the forests is primarily for the protection of the water supply, and this is not possible through the denudation of the lands. Therefore this school failed of its object, as understood by its founders, a failure which was not due, however, to the work of the university, which followed out the letter and spirit of the law. The report of the committee of the assembly at the last session of the legislature, and the knowledge of the disapproval of many of our citizens, led me to veto the item for its support in the appropriation bill of 1903. The question, therefore, is before you, and to the legislature we must accordingly look for such action as will properly protect all interests. Cornell University undertook this work at the request of the state, and as such was its agent. In so doing it has made contracts for which it is primarily responsible, but which responsibility as the agent of the commonwealth it should not be called upon to assume. Neither should the school it founded be discontinued, because with the lapse of years a proper understanding of scientific forestry will become more and more a necessity. This is particularly true of farm forestry, which will form an important part in the future of agriculture within the state. That our people do not desire, however, that public lands shall be denuded is beyond question. It would seem, therefore, desirable that immediate legislation be had to recover to the state this property, of which there are about 30,000 acres, and for the payment into the treasury of the unexpended portion of the capital fund advanced by the state. Permission should be given to clear up and remove all cut timber and wood by the university, so that the danger of fire may be lessened. The contracts made between Cornell and the Brooklyn Cooperage Company might be left with the executive for adjustment, and failing in this either to the Court of Claims, if the state

is to be the party defendant, or to the Supreme Court if Cornell should be the responsible defendant. In neither case, however, should any burden be placed upon the university.

MR. JAMES BOYLE, U. S. Consul at Liverpool, England, writes to the Department of State that the British government has taken the first step toward the adoption of the decimal system of weights. It has just been announced by the Board of Trade that, under a special order in council, it will sanction the use of a weight of 50 pounds, instead of the present standards of 112 pounds (called a hundredweight) and 56 pounds (called a half hundredweight). The 50 pounds is by this action made a legal standard of weight. This reform has been adopted after forty years of agitation by Liverpool merchants and later on by petitions to the government by the chambers of commerce throughout the country, and particularly by the chamber of commerce of this city. Liverpool has felt the necessity for the change more than any other city, as this is the leading entrepôt for American and colonial produce of bulk, the weighing of which is a considerable item in the handling and, indeed, in the ultimate cost of the shipments. More cotton, corn, provisions and tobacco are imported into Liverpool than into any other city in the world, and by far the largest proportion of these imports come from the United States; so the United States is peculiarly interested in the reform just instituted. The *Liverpool Journal of Commerce* comments approvingly as follows:

All these great quantities are calculated by the American sellers in pounds avoirdupois, but by the British buyers they have had to be counted in hundredweights, quarters, and pounds, in accordance with our antiquated and absurd and anomalous system of weights. What is the consequence? To give a concrete example: The buyer wishes to ascertain, say, the weight of 100 pounds of tobacco; to do so the nearest weight he can employ is a quarter, or 56 pounds, to which must be added smaller weights until the exact quantity is ascertained. But two 50-pound weights will give him the exact amount at once; three will give him the weight of 150 pounds, four 200 pounds, and so on, smaller weights being used for fractions of 50 pounds. The consequence is an enormous simplification of calculation. It should

be remembered that the men who weigh these materials at the docks are not, as a rule, mathematicians who can tell the time of day by algebra. They are largely day laborers, who have not had a superior education, and to weigh quantities with a set of weights necessitating the calculation of fractions of pounds, and thereby the use of dozens of small weights, necessitates a mental effort of which all are not capable, and the use of a multiplicity of weights which confuses them leads to errors and loss of time—and time is money. But by the adoption of a 50-pound weight a unit of calculation has been obtained which will sweep away a whole set of weights, prevent errors, and save confusion, time and money. It should be remembered that the present complicated and wasteful method of calculating weights has to be gone through four times—first, when the goods are warehoused; second, by the customs, for the purpose of duty; third, in the counting-house; and fourth, in the factory—and in all these cases the same cumbrous system of calculation by hundredweights, quarters and pounds has to be gone through, and the loss of time, convenience and money quadrupled. But by the adoption of a 50-pound weight, though four separate calculations will still be necessary, they can be done simply and quickly. The savings in bookkeeping will alone be great. The present system necessitates a maze of figures of different denominations; but by their reduction to the one common denominator of pounds weight whole columns of figures will be saved and the risk of mistakes minimized.

Americans have great difficulty in understanding the English system of weights—almost as much as they encounter in trying to understand the English fractional system of coinage. For instance, if you ask a man here how much he weighs he will tell you, say, '11 stone 7.' A 'stone' is 14 pounds; so 11 stone would be 154 pounds, and adding the extra 7 pounds the weight given would be 161 pounds. Even Englishmen 'to the manner born' have to make a mental calculation in arriving at the result in pounds in such a case. Sometimes provisions and other articles are sold at so much a stone, and then if the quantity purchased weighs a few odd pounds over a stone or a number of stones the purchaser and seller have to figure out the price per pound. It is the hope and expectation that the results from the adoption of the new

standard weight of 50 pounds will be so satisfactory that before long the old-fashioned 'hundredweight' of 112 pounds will be entirely abolished along with the stone, and that a decimal fractional system of 5 pounds, 10 pounds, and 25 pounds will come into general use.

WE learn from the London *Times* that the first meeting for the session of the Geologists' Association, held recently, took the form of a *conversazione*, held in the library of University College, London. The most important geological exhibits were the erratics from Hertfordshire, and the faceted pebbles from Berkshire and Oxfordshire, shown by Dr. Salter; the Hertfordshire pudding-stones by Mr. Green, and the iron, flint and lime concretions, closely resembling animal forms, sent by Dr. Abbitt. The small erratics are of great interest, as it is not easy to account for the presence of rhomboid porphyry of Norwegian origin on the uplands of Hertfordshire. On this subject Dr. Salter intends to publish a paper, advancing another theory than that generally accepted—the transportation by ice across the North Sea. The faceted pebbles of banded quartzite were probably worn down by a natural sand-blast. Anthropology was well represented. The Rev. R. Ashington Bullen showed prehistoric implements; as did Mr. Elliott, whose exhibits included photographs of and implements from the Mentone caves. Among the other exhibits were worked Chinese jade, collections of fossil mollusca, photographs and maps, and other objects of interest to students of geology.

THE following books have recently been sold at auction in London: 'Catalogue of the Birds in the British Museum,' from Vol. 1 to Vol. 27, 1874-95, with numerous beautifully-colored plates, £32; the *Ibis*, from 1859 to 1903, with numerous colored plates and the general index, 1877-94, £60; 'Colored Figures of the Birds of the British Islands,' 1891-97, second edition, £63; H. E. Dresser, 'History of the Birds of Europe,' published by the author, 1871-96, with numerous colored plates, £61; two by John Gould, 'The Birds of Great Britain,' 1873, £58; 'Birds of Asia,' 1850-83, £75; 'English Botany,' 1790-94, 36 volumes,

£18 15s.; W. C. Hewitson, 'Exotic Butterflies,' 1876, £19.

UNIVERSITY AND EDUCATIONAL NEWS.

CORNELL UNIVERSITY will receive more than \$200,000 from the estate of the late Frederick W. Guiteau of Irvington-on-the-Hudson, which is nearly \$50,000 more than was announced at the time of Mr. Guiteau's death last year. The money will be used as a fund for the assistance of needy students, and will be lent them without interest.

By the will of George Sykes, of Rockville, Conn., a fund of \$100,000 is provided for a manual training school.

A NEW science hall, to cost \$100,000 is to be erected at Colgate University. A sum of about \$30,000 has been subscribed for the purpose.

THE French minister of public instruction has recommended the establishment of a chair of physics at the University of Paris, to which M. Curie will be called.

IN the report of the registration of the universities, recently published in SCIENCE, the number of students in the graduate school of the University of Michigan was given as 69. We are informed that it was at that time at least 85, and is now nearly 100.

DR. CHARLES W. DABNEY has accepted the presidency of the University of Cincinnati.

DR. GEORGE STUART FULLERTON, professor of philosophy at the University of Pennsylvania and formerly dean and vice-provost, has been elected professor of philosophy at Columbia University.

AT Teachers College, Columbia University, Dr. Edward L. Thorndike was promoted from an adjunct professorship to a professorship of psychology; Dr. J. H. MacVannell from an instructorship to an adjunct professorship in education, and Dr. Herman Vulté from a lectureship to an adjunct professorship of domestic science.

MR. GILBERT VAN INGEN has been appointed assistant in geology and curator in invertebrate paleontology at Princeton University.

MR. HOWARD D. MINCHIN, of the University of Michigan, has been appointed instructor in physics at Rochester University.